

Title (en)

Integrated semiconductor memory with memory cells having ferroelectric memory effect

Title (de)

Integrierter Halbleiterspeicher mit Speicherzellen mit ferroelektrischem Speichereffekt

Title (fr)

Mémoire intégrée à semiconducteurs avec des cellules de mémoire ayant un effet de mémorisation ferroélectrique

Publication

EP 1126470 A3 20030205 (DE)

Application

EP 01100917 A 20010116

Priority

DE 10005619 A 20000209

Abstract (en)

[origin: JP2001283585A] PROBLEM TO BE SOLVED: To prevent change of memory contents caused by faulty voltage by connecting a column line and a charging line to a connection terminal 22 of a common power feeding potential GND in a non-active operation mode and in a common read-out amplifier or a driver circuit. SOLUTION: This integrated semiconductor memory is provided with a memory cell field having a ferroelectric memory effect memory cell MC, row lines WL1, and column lines BL1, the memory cell is inserted between one column line and a charging line PL1, the column line is connected to a read-out amplifier 2 from which an output signal S21 is taken, the charging line is connected to the driver circuit 3 connecting the amplifier 2 to a potential V1 and GND. and the column line and the charging line have an activation or a non-activation mode.

IPC 1-7

G11C 11/22

IPC 8 full level

G11C 11/22 (2006.01); **H10B 20/00** (2023.01)

CPC (source: EP KR US)

G11C 11/22 (2013.01 - EP KR US)

Citation (search report)

- [PX] EP 0994486 A2 20000419 - SHARP KK [JP]
- [X] US 5892706 A 19990406 - SHIMIZU MITSURU [JP], et al
- [XA] EP 0709851 A2 19960501 - NEC CORP [JP]
- [A] US 5862089 A 19990119 - RAAD GEORGE B [US], et al
- [A] DE 19832994 A1 20000127 - SIEMENS AG [DE]
- [XA] HIROKI FUJISAWA ET AL: "THE CHARGE-SHARE MODIFIED PRECHARGE-LEVEL(CSM) ARCHITECTURE FOR HIGH-SPEED AND LOW-POWER FERROELECTRIC MEMORY", 1996 SYMPOSIUM ON VLSI CIRCUITS. DIGEST OF TECHNICAL PAPERS. HONOLULU, JUNE 13 - 15, 1996, SYMPOSIUM ON VLSI CIRCUITS, NEW YORK, IEEE, US, vol. SYMP. 10, 13 June 1996 (1996-06-13), pages 50 - 51, XP000639013, ISBN: 0-7803-3340-3

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

DOCDB simple family (publication)

EP 1126470 A2 20010822; EP 1126470 A3 20030205; EP 1126470 B1 20071128; CN 1265393 C 20060719; CN 1308338 A 20010815; DE 10005619 A1 20010830; DE 50113306 D1 20080110; JP 2001283585 A 20011012; KR 100796847 B1 20080122; KR 20010100781 A 20011114; TW 512338 B 20021201; US 2001038561 A1 20011108; US 6515890 B2 20030204

DOCDB simple family (application)

EP 01100917 A 20010116; CN 01103438 A 20010208; DE 10005619 A 20000209; DE 50113306 T 20010116; JP 2001030127 A 20010206; KR 20010005832 A 20010207; TW 90102737 A 20010208; US 78030501 A 20010209